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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,057	12/09/2003	Hideo Hoshuyama	117994	2951

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EXAMINER	
TSAI, TSUNG YIN	
ART UNIT	**PAPER NUMBER**
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/730,057	HOSHUYAMA, HIDEO	
	Examiner	Art Unit	
	Tsung-Yin Tsai	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/9/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/15/2004 and 12/9/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 8-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In claims 8-13, a "computer program" is being recited; however, computer program would reasonably be interpreted by one of ordinary skill in the art as software, per se. This subject matter is not limited to that which falls within a statutory category of invention because it is limited to a process, machine, manufacture, or a composition of matter. Software is a function descriptive material and a function descriptive material is non-statutory subject matter.

Claim Rejections – 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6, 8 and 13 are rejected under 35 U.S.C. 102(b) as being unpatentable over Kasson (US Patent Number 5,450,216).

Kasson teaches regarding image processing device (figure 8) comprising:

(1) Regarding claims 1 and 8:

a color-gamut determining part for determining a color gamut as a range of color distribution from input image data (figure 1, figure 3, figure 4, column 1 lines 30-38, column 1 lines 55-67 to column 2 lines 1-15, column 7 lines 34-43, Figures show the gamut mapping that finds the range of the color gamut of the image.);

a color-space determining part for determining a color space substantially containing the color gamut determined by said color-gamut determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in.); and

a color-space conversion part for converting the input image data into image data which is rendered in the determined color space (figure 1, figure 3, figure 4, figure 7C, 130 figure 8, figure 9, column 1 lines 45-50, column 6 lines 3-30. Color-space conversation part is seen as the display format of the image data. Formats such as NTSC, RBG for display or other display like hard-copy display in format such as CMY for printers.).

(2) Regarding claims 6 and 13:

said color-space conversion part (figure 1, figure 3, figure 4, figure 7C, 130 figure 8, figure 9, column 1 lines 45-50, column 6 lines 3-30. Color-space conversation part is seen as the display format of the image data. Formats such

as NTSC, RBG for display or other display like hard-copy display in format such as CMY for printers) transmits information on the color space determined by said color-space determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in.) to a destination to which the converted image data is output (column 6 lines 3-30).

5. Claim 7 is rejected under 35 U.S.C. 102(b) as being unpatentable Hung (US Patent Number 6,075,563).

Hung disclose a electronic camera comprising:

(1) Regarding claim 7:

An electronic camera comprising (title, abstract):

an image-capturing part (figure 1) for capturing an optical image (column 2 lines 20-30) formed with a shooting lens (12 figure 1, figure 5-7) to create image data (column 2 lines 20-30); and

the image processing device (title, abstract, figure 1) according to claim 1, for determining a range of color distribution (column 6 lines 23-65) of the created image data to determine a color space (column 7 lines 30-35), and

converting the created image data into image data which is rendered in the determined color space (column 6 lines 23-45, column 7 lines 30-35, column

10 lines 50-67. Determine color space to be display can be such as RBG, CMY, LMS as well as that of HDTV.).

Claim Rejections – 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-3 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasson (US Patent Number 5,450,216) in view of Matsumoto et al (US Patent Number 5,606,632).

(1) Regarding claims 2 and 9:

Kasson teaches regarding color-gamut determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in) and calculates a hue (column 4 lines 23-39) and a chroma (column 4 lines 23-39), determine a maximum chroma (column 4 lines 23-39) for each of hues calculated; and higher than that of the input image data (56 figure 7A, 56 figure 7B, 56 figure 7C, figure 9, column 1 lines 15-20) in all of the hues calculated by said color-gamut

determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in.).

Kasson does not teach regarding plurality of image regions.

However, Matsumoto et al teaches regarding plurality of image regions (figure 6-7, s4 figure 8, figure 9-11, column 6 lines 16-38).

It would have been obvious to one skill in the art at the time of the invention to employ Matsumoto et al to Kasson regarding sectioning the original image to plurality of image regions, such that the processing speed is extremely increased for reducing the size of the original color image (column 8 lines 32-35).

(2) Regarding claims 3 and 10:

Kasson further teaches said color-space conversion part (figure 1, figure 3, figure 4, figure 7C, 130 figure 8, figure 9, column 1 lines 45-50, column 6 lines 3-30. Color-space conversation part is seen as the display format of the image data. Formats such as NTSC, RBG for display or other display like hard-copy display in format such as CMY for printers) transmits information on the color space determined by said color-space determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be

encompass and format that it will be display in.) to a destination to which the converted image data is output (column 6 lines 3-30).

8. Claims 4-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasson (US Patent Number 5,450,216) in view of Mizumoto (USPG-PUB 2002/0060688 A1, IDS.)

(1) Regarding claims 4 and 11:

Kasson teaches regarding said color-gamut determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in) maps the input image data (56 figure 7A, 56 figure 7B, 56 figure 7C, figure 9, column 1 lines 15-20) and more of the color gamut of the input image data (column 7 lines 34-64).

Kasson does not teach regarding putting the input image data on a chromaticity diagram.

However, Mizumoto teaches regarding chromaticity diagram (figures 1-23, page 1 paragraphs 0007, 0009, 0010).

It would have been obvious to one skill in the art at the time of the invention to employ Mizumoto teachings to Kasson regarding chromaticity diagram, such that it will enable to increase the performance of the color reproduction in the imaging processing and the image outputting process (page 1

paragraph 0012), which therefor within display the image signal with higher fidelity (page 1 paragraph 0014).

(2) Regarding claims 5 and 12:

Kasson further teaches said color-space conversion part (figure 1, figure 3, figure 4, figure 7C, 130 figure 8, figure 9, column 1 lines 45-50, column 6 lines 3-30. Color-space conversation part is seen as the display format of the image data. Formats such as NTSC, RBG for display or other display like hard-copy display in format such as CMY for printers) transmits information on the color space determined by said color-space determining part (figure 1, figure 3, figure 4, column 1 lines 45-67 to column 2 lines 1-15, column 6 lines 3-13, column 7 lines 34-64. Gamut mapping determines the color space that it will encompass. With such information it will determine what format the data image will be encompass and format that it will be display in.) to a destination to which the converted image data is output (column 6 lines 3-30).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cowan et al (US 2003/0063299 A1) disclose color calibration method and apparatus.

Gruzdev et al (US 20030012433 A1) disclose automatic saturation adjustment.

Ito et al (US Patent Number 6,437,792 B1) disclose image processing apparatus and method, color gamut conversion table creating apparatus and method, storage

medium having image processing program recorded therein, and storage medium having recorded therein color gamut conversion table creating program.

Lipson et al (US Patent Number 5,963,670 A) disclose method and apparatus for classifying and identifying images.

Tsuruoka et al (US 20010016064 A1) disclose image processing apparatus.

Hatakenaka (US 6,453,072 B1) disclose image coding system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tsung-Yin Tsai whose telephone number is (571) 270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tsung-Yin Tsai
4/10/2007

SHUWANG LIU
SUPERVISORY PATENT EXAMINER